

CLAIMS

1. A method of protecting a solid-state protein from ionizing radiation which comprises combining said protein with a radiation-protecting amount of a methoxysalicylaldehyde derivative prior to exposing said protein to said ionizing radiation.

2. A method according to claim 1 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.

3. A method of protecting a solid-state protein from ionizing radiation which comprises combining said protein with radiation-protecting amounts of a methoxysalicylaldehyde derivative and 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid prior to exposing said protein to said ionizing radiation.

4. A method according to claim 3 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.

5. A method of protecting a solid-state protein from ionizing radiation which comprises combining said protein with radiation-protecting amounts of a methoxysalicylaldehyde derivative and isopropanol prior to exposing said protein to said ionizing radiation.

6. A method according to claim 5 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.

7. A formulation comprising a solid-state protein and a methoxysalicylaldehyde derivative.

8. A formulation according to claim 7 wherein said protein is a drug.

9. A formulation according to claim 7 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.

10. A formulation according to claim 7 wherein said methoxysalicylaldehyde derivative comprises at least about 0.1% by weight of said formulation.

11. A formulation according to claim 10 wherein said methoxysalicylaldehyde derivative comprises from about 2.9% to about 8.0% by weight of said formulation.

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12. A formulation comprising a solid-state protein, a methoxysalicylaldehyde derivative, and 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid.

10 13. A formulation according to claim 12 wherein said protein is a drug.

14. A formulation according to claim 12 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.

15 15. A formulation according to claim 12 wherein said methoxysalicylaldehyde derivative comprises at least about 0.1% by weight of said formulation, and said 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid comprises at least about 0.1% by weight of said formulation.

20 16. A formulation according to claim 15 wherein said methoxysalicylaldehyde derivative comprises from about 2.9% to about 8.0% by weight of said formulation, and said 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid comprises from about 0.1% to about 1.0% by weight of said formulation.

25 17. A formulation comprising a solid-state protein, a methoxysalicylaldehyde derivative, and isopropanol.

18. A formulation according to claim 17 wherein said protein is a drug.

30 19. A formulation according to claim 17 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.

20. A formulation according to claim 17 wherein said methoxysalicylaldehyde derivative comprises at least about 0.1% by weight of said formulation, and said isopropanol comprises at least about 0.1% of said formulation.

5 21. A formulation according to claim 17 wherein said methoxysalicylaldehyde derivative comprises from about 2.9% to about 8.0% by weight of said formulation, and said isopropanol acid comprises from about 0.1% to about 4.0% of said formulation.

10 22. A composition comprising a methoxysalicylaldehyde derivative and 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid.

23. A composition according to claim 22 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.

15 24. The use of said composition of claim 22 in pharmaceutical formulations as a radioprotectant.

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